

**WHAT IS CLAIMED IS:**

1. A method comprising:

5 generating a first clock signal with a first frequency; and

utilizing said first clock signal to generate a second clock signal with a second frequency;

10 wherein said second clock frequency is generated by dropping selected pulses of said first clock signal.

2. The method of claim 1, wherein utilizing said first clock signal comprises using said first clock signal to select a sequence of values from a storage element.

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3. The method of claim 2, wherein said storage element comprises a first and second shift register, and wherein said sequence of values are alternately selected from said registers.

20 4. The method of claim 1, further comprising:

counting sequences of pulses of said first clock signal; and  
detecting said selected pulses of said first clock signal.

25 5. The method of claim 4, wherein said sequences include a fixed number of pulses, and wherein said selected pulses correspond to particular counts of said pulses within said fixed number of pulses.

6. The method of claim 3, further comprising loading said shift registers with predetermined values.

7. The method of claim 6, further comprising changing a contents of said registers at selected times in order to generate said second clock signal with an increasing frequency.

8. The method of claim 6, further comprising changing a contents of said registers at selected times in order to generate said second clock signal with an decreasing frequency.

9. A clock circuit comprising:

a first circuit configured to generate a first clock signal; and

circuitry configured to utilize said first clock signal to generate a second clock signal with a second frequency, wherein said second clock frequency is generated by dropping selected pulses of said first clock signal.

10. The clock circuit of claim 9, further comprising a storage element configured to store a pattern of bits, wherein said circuitry is configured to utilize said first clock signal to select a sequence of values from a storage element.

11. The clock circuit of claim 10, wherein said storage element comprises a first and second shift register, and wherein said circuitry is configured to select said sequence of values from said registers in an alternating manner.

12. The clock circuit of claim 9, further comprising a counter configured to count sequences of pulses of said first clock signal, and wherein said circuitry is configured to detect said selected pulses of said first clock signal.

13. The clock circuit of claim 12, wherein said sequences include a fixed number of pulses, and wherein said selected pulses correspond to particular counts of said pulses within said fixed number of pulses.

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14. The clock circuit of claim 11, wherein said first circuit is further configured to load said shift registers with predetermined values.

15. The clock circuit of claim 14, wherein said first circuit is further configured to  
10 change a contents of said shift registers at selected times in order to generate said second clock signal with an increasing frequency.

16. The clock circuit of claim 14, wherein said first circuit is further configured to  
15 change a contents of said shift registers at selected times in order to generate said second clock signal with a decreasing frequency.

17. The clock circuit of claim 9, wherein said clock circuit is included within a processor.

20 18. A system comprising:

a reference clock generator configured to generate a reference clock signal; and  
a processor comprising a clock circuit configured to:

receive said reference clock signal;

25 generate a first clock signal from said reference clock signal; and

utilize said first clock signal to generate a second clock signal with a  
second frequency, wherein said second clock frequency is  
generated by dropping selected pulses of said first clock signal.

19. The system of claim 18, further comprising a storage element configured to store a pattern of bits, wherein said clock circuit is configured to utilize said first clock signal to select a sequence of values from a storage element.

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20. The system of claim 19, wherein said storage element comprises a first and second shift register, and wherein said clock circuit is configured to select said sequence of values from said registers in an alternating manner.

10 21. The system of claim 18, wherein said clock circuit is further configured to count sequences of pulses of said first clock signal, and wherein said clock circuit is configured to detect said selected pulses of said first clock signal.

15 22. The system of claim 20, wherein said clock circuit is further configured to load said shift registers with predetermined values.

23. The system of claim 22, wherein said clock circuit is further configured to change a contents of said shift registers at selected times in order to generate said second clock signal with an increasing frequency.

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24. The system of claim 22, wherein said clock circuit is further configured to change a contents of said shift registers at selected times in order to generate said second clock signal with a decreasing frequency.

25 25. The system of claim 18, further comprising a system controller coupled to said processor, wherein said system controller is coupled to receive said reference clock signal.

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